## PATENT ABSTRACTS OF JAPAN

(11)Publication number:

2000-262969

(43) Date of publication of application: 26.09.2000

(51)Int.CL

B06B 1/04

B06B 1/16

H02K 7/065

(21)Application number: 11-068164

(71)Applicant: MATSUSHITA ELECTRIC IND CO LTD

(22)Date of filing:

15.03.1999

(72)Inventor: KUYAMA KOJI

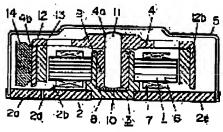
YOSHIDA SHIGERU FUKUOKA KIMIMICHI UMEHARA MIKIO

## (54) FLAT VIBRATION MOTOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a vibration motor featuring a small size, lightness in weight; low electric power consumption, maximum vibration and thin type flat structure as the vibration motor to be used for portable apparatus and to use this motor for embodiment of the thin, lightweight and long term usable portable apparatus.

SOLUTION: A rotor 4 has a magnet 13 and a cylindrical part 12b. The magnet 13 faces the outer periphery of a stator core 6 apart a spacing. The cylindrical part 12b encloses the outer periphery of the magnet 13 approximately over the entire periphery thereof. An unbalance weight 14 is disposed on the outer periphery of the cylindrical part 12b. The unbalance weight 14 is fixed by laser welding to the outer side of the cylindrical part 12b. The unbalance weight 14 is formed of an alloy



containing tungsten and copper.

**LEGAL STATUS** 

[Date of request for examination]

08.06.2000

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

3159202

[Date of registration]

16.02,2001

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

LIST D

Also published as:

EP0438741 (A1)

US4952469 (A1)

## DEPOLARIZER FOR LITHIUM NEGATIVE ELECTRODE BATTERY, AND LITHIUM BATTERY

Patent number:

JP4137463

Publication date:

1992-05-12

Inventor:

WICELINSKI STEVEN P

Applicant:

MINE SAFETY APPLIANCES CO

Classification:

- international:

H01M4/60; H01M4/06

- european:

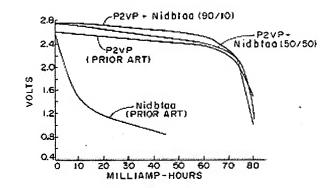
Application number:

JP19900417077 19901229

Priority number(s):

## Abstract of JP4137463

PURPOSE: To provide a battery with a high performance by employing depolarizer containing particulated polyvinylpyridine with a specific atomic weight and a specific amount of bivalent metal, dibenzotetra-aza-neurene. CONSTITUTION: Depolarizer comprises pelletized or fused mixture of iodine, polyvinylprydine, suitably poly-2-vinylprydine and bivalent metal, dibenzotetra- aza-neurene (Mdbtaa). The atomic weight of the polyvinylprydine is suitably 30,000-400,000. In a suitable manufacturing method, the iodine and the polymer are mixed with the Mdbtaa in the amount of about 1% by weight - 50% by weight of the polymer. Thereby, a battery with remarkably large current characteristics in comparison with conventional batteries can be provided.



Data supplied from the esp@cenet database - Worldwide

-13!